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**(71) Name and address of the Applicant:
Fritz Steffen, 32108 Bad Salzuflen, DE**

**74) Name and address of the Representative
D. Weber, Dipl.-Chem. Ph.D.; K. Seiffert, Dipl.-Phys.; W. Lieke,
Dipl.-Phys. Ph.D.,
Patent Attorneys, 65189 Wiesbaden**

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Dr. Dieter Weber, *Dipl.-Chem.*
Klaus Seiffert, *Dipl.-Phys.*
Dr. Winfried Lieke, *Dipl.-Phys.*
Patent Attorneys

Weber, Seiffert, Lieke - Patent Attorneys - Postfach 6145-6200 Wiesbaden

German Patent Office
Zweibrückenstr. 12

8000 Munich 2

Gustav-Freytag-Strasse 25

6200 Wiesbaden 1

Telephone 0611/372720 and 372580

Telex 4-186247

Telefax 0611/372111

Telegram Address: Willpatent

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Fritz Steffen, Mühlenweg 22, D-4902 Bad Salzuflen 1

One-piece information device

The innovation consists of information devices which are supposed to impart to the user any information, such as instructions for use, recipes, warnings and similar in connection with product containers. Such information devices can serve for the insertion into or attachment onto a product container, and can be, for example, in the form of package inserts, adhesive labels or, when equipped with openings on the neck of a bottle, with bottle hangers. Such information devices are known.

In many cases, now there is the need or desire to have such information devices with as large information area as possible, especially when the instructions for use have to be printed in many languages or when a number of recipes or directions for use are to be displayed. In addition, the information devices must have a compact structure, which provides processing on the usual machines, in order that they could be applied or packaged more easily.

According to the innovation, this task is solved with a one-piece information device made of a folded sheet of paper, characterized by the fact that it consists of at least three field bundles connected with one another in rows with the aid of fold lines, where the third field bundle unfolds in the row plane-parallel onto the second field bundle, the first field bundle in the row folds plane-parallel onto the third field bundle and is secured on it and each field bundle consists of at least two fields folded plane-parallel onto one another, which are connected to one another through fold lines perpendicularly to the fold lines between the field bundles bonded to one another in the row.

When we speak of a sheet of paper in this context, this can be plastic-coated and/or metal-foil-coated sheet of paper or foldable cardboard sheets, but usually, for reasons of cost, normal paper is used.

When we speak here of field bundles, this means that a bundle has at least two fields folded onto one another in a plane-parallel manner, where field bundles with three or four fields on top of one another are preferred. Such field bundles are obtained by folding, through fold lines, rows of fields connected to one another in a fan-like manner or in the form of a parallel fold. In this way a large printable area is obtained, which can be printed as a whole or in individual sections with information or pictures. The paper sheet can be unfolded easily. If required, it can also be cut into individual strips when, according to a preferred embodiment, the fold lines, especially the fold lines which are perpendicular to the fold lines between the field bundles connected to one another in a row, are produced as perforation lines. These also facilitate folding, so that optionally all fold lines can be produced as perforated lines.

In order to further facilitate the folding, and to avoid tensions within the folded information device, it is necessary that the third field bundle in the row in the direction perpendicular to the fold lines be narrower than the second field bundle.

As stated above, the first field bundle in the row is attached to the third field bundle. The attachment can be essentially over the entire area or over only a part of the area, but substantially full-area attachment is preferred. This can be done by gluing on or sealing on using expediently such adhesives or hot-sealable plastics, which form only a weak bond, so

that the bond between the first and third field bundle can be easily separated by the user without damaging the surface of the paper.

Also, to facilitate folding and to avoid tension within the folded information device, it is expedient to have the first field bundle in the direction perpendicular to the fold line made narrower than the second field bundle.

As an innovation, information devices with three fields are the basic form, because at least this number of fields must be present. However, in order to increase the information area, it is expedient when, on the third field bundle in the row, always at least one other field bundle follows through the fold line and folded plane-parallel between the second and third field bundle. The number of additional field bundles is not essential. The upper limit arises from the foldability, so that the more field bundles must be attached, the thinner the paper used. The additional field bundles, which are connected in a row with the third field bundle, are expediently in the form of a fan-fold and/or parallel fold, or optionally also in a mixed form of the two, as they are folded on top of one another and thus lie between the second and third field bundle. Expediently, the additional field bundles in the direction perpendicular to the fold lines are narrower than the second field bundle, again to facilitate folding. When we speak here in context of narrower fields, it is preferable to have these narrower by 0.3 to 3 mm, preferably by 0.5 to 1.5 mm than the said wider field bundles.

The innovation is explained further with the aid of the drawing.

Figure 1 is a top view onto a blank of an embodiment according to the innovation and

Figure 2 is a perspective representation of an information device obtained from the blank according to Figure 1, on an enlarged scale, where each represented field should consist of a field bundle of three fields lying plane-parallel on one another.

The blank shown in Figure 1 consists of 21 fields a to g, a' to g' and a" to g". These rows of fields are connected to one another by perforated fold lines 3 and 4. Since fields with the same letter (for example, a, a' and a") have the same dimensions, when folding the three field rows of a to g, a' to g' and a" to g" on one another, seven field bundles connected to

one another in a row are obtained, each consisting of three layers or fields. For the sake of simplicity, these field bundles are designated with the letter a to g in Figure 2. The rows of fields shown in Figure 1, consisting of seven connected fields, are folded onto one another in the form of a parallel fold or, preferably, in the form of a fan-fold.

Then, the field bundle rows obtained in this way, shown on an enlarged scale in Figure 2, are folded in such a way so that field bundle a will lie on field bundle c and field bundles d to g, which are folded together in a mixed fan-fold and parallel fold form, lie between the field bundles b and c. The inside of field bundle a is joined to the outside of field bundle c with the aid of an adhesive 5.

Patent Claims

1. One-piece information device consisting of a folded sheet of paper, characterized by the fact that it consists of at least three (a, b, c) field bundles (1) connected to one another in a row by fold lines (2), whereby the third field bundle (c) in the row folds plane-parallel onto the second field bundle (b), the first field bundle (a) in the row folds plane-parallel onto the third field bundle (c) and is secured on it, and each field bundle consists of at least two plane-parallel fields (3) folded onto one another, connected to one another through fold lines (4) perpendicular to the fold lines (2) between the field bundles (1) connected to one another in a row.
2. Information device according to Claim 1, **characterized by the fact** that the third field bundle (a) in the row in the direction perpendicular to the fold lines (2) is narrower than the second field bundle (b).
3. Information device according to Claim 1 or 2, **characterized by the fact** that the first field bundle (a) is glued or heat-sealed onto the third field bundle (a) essentially over the entire area or only over a part of the area.
4. Information device according to Claim 1 to 3, **characterized by the fact** that the first field bundle (a) in the direction perpendicular to the fold lines (2) is narrower than the second field bundle (b).
5. Information device according to one of Claims 2 to 4, **characterized by the fact** that the third field bundle (c) in the row is joined, through a fold line, by at least one other field bundle (d to g) and is folded plane-parallel between the second (b) and third (c) field bundles.
6. Information device according to Claim 5, **characterized by the fact** that it has several field bundles (d to g) which follow the third field bundle (c) in a row, always connected to one another through fold lines (2), and these are folded in the form of a

fan and/or with a parallel fold and then lie between the second (b) and third (c) field bundle.

7. Information device according to Claim 5 or 6, characterized by the fact that the additional field bundles (d to g) are narrower than the second field bundle (b) in the direction perpendicular to the fold lines (2).
8. Information device according to one of Claims [blank] to 7, characterized by the fact that the fold lines are designed as perforation lines.
9. Information device according to one of Claims 1 to 8, **characterized by the fact** that the narrower field bundles are narrower by 0.3 to 3 mm, preferably by 0.5 to 1.5 mm than the wider field bundles.

a	b	c	d	e	f	g
a'	b'	c'	d'	e'	f'	g'
a''	b''	c''	d''	e''	f''	g''

3

2

4

Fig. 1

Fig. 2

